In the Specification:

Please make the following amendments to the paragraph on page 17, lines 4-6. The amendment is believed to introduce no new matter.

Phase 3: Partition the entire netlist into a top half ~~412~~ and bottom half ~~414~~, minimizing cut-size (VV wires) while respecting the MegaLab columns previously assigned. The result is 8 octants 421 - 428.

Please make the following amendments to the paragraph on page 22, line 13 - page 23, line 8. The amendment is believed to introduce no new matter.

In another embodiment, after each partition cut, a determination is made as to whether the delays from the partition meet or beat the previous estimate (512). The previous estimate is the estimate of the critical path delays before the most recently performed partitioning cut. For example, after a phase 2 partition, critical paths to be avoided in the next partition are identified by calculating path delays as a sum of actual delays generated by previous cuts and the statistical estimates as to delays from future cuts. Where the looping option represented by block 512 is incorporated into the process, the estimated critical path delays calculated after the last partitioning cut are compared with the previous estimate of critical path delays based on the statistical data or phase-local for that type of cut. If there is a sufficient difference, i.e. the critical path delays are getting worse, the phase local will be adjusted to reflect the proportionate share of actual delays experienced in the most recent partitioning phase and appropriate adjustments made to the probabilistic estimates for the lower levels of hierarchical connections to develop a new phase local. The adjusted phase local would in this case show an increased delay to reflect the actual observations from the most recent partition attempt where the delays from the cut were longer than previously estimated (before the cut). Using the new phase local

data , the design will be repartitioned with the same level cut (516) followed by a determination as to whether the new delays correspond to the most recent estimate. (512). If the estimate of critical path delay does not meet or beat a previous estimate, an estimate of delays from future cuts is adjusted. (514) This loop can repeat until satisfactory correspondence between the actual and estimated delays for that partition level occurs. This process continues until the design is fully placed (518).

Respectfully submitted,
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